

AMENDMENTS TO THE CLAIMS

The current listing of the claims replaces all previous amendments and listings of the claims.

1. (Currently Amended) A method for the decontamination of oily cuttings, coming from the drilling of drilling oil wells, and the contemporaneous recovery of the an oily component, comprising the following steps:

a. optional mixing of the cuttings with an inert material;

[[b.]] mixing [[of]] said cuttings with a solvent compressible to the a liquid state at a pressure value ranging from 45 to 80 bar and causing separation of an oily fraction at a pressure ranging from 30 to 60 bar, and at a temperature corresponding to the a saturation value, with dissolution of the to dissolve the oily fraction of the cutting cuttings;

e. removal of the liquid phase (solution) removing a liquid phase including the solvent and the oily fraction from the solid phase (cutting) cuttings;

[[d.]] expansion and heating of the solution leaving step (a), with the recovery of liquid phase to recover the oily fraction discharged, and to recover the solvent in vapour a vapor phase;

[[e.]] cooling and condensation of the process solvent and its recycling to step (a), after possible under cooling in the vapor phase for use in a subsequent mixing with other cuttings.

2. (Canceled)

3. (Currently Amended) The method according to claims 1 and 2 claim 1, wherein the mixing step of the cuttings and the separation step of the oily fraction take place at a temperature close to the saturation value of the liquid phase.

4. (Currently Amended) The method according to ~~any of the claims from 1 to 3~~  
claim 1, wherein ~~the cooling and condensation of the solvent in the vapor phase occurs after~~  
~~under-cooling degree of the liquid phase ranges at a temperature ranging from 0 to 5° C.~~

5. (Currently Amended) The method according to ~~any of the claims from 1 to 4~~  
claim 1, wherein the solvent is fed to ~~the~~ an extraction vessel in a ratio from 2 to 20 times by  
weight with respect to the cuttings during the mixing of the cuttings with the solvent.

6. (Currently Amended) The method according to ~~any of the claims from 1 to 5~~  
claim 1, wherein ~~the cutting is mixed with 10-40% by weight with respect to the total of an~~  
inert material further comprising:

mixing the cuttings with an inert material, the cuttings being 10 to 40% by weight of  
the inert material, prior to mixing the cuttings with the solvent.

7. (Currently Amended) The method according to ~~any of the claims from 1 to 6~~  
claim 6, wherein the inert material ~~consists of~~ includes other cuttings already treated and  
therefore partially recycled.

8. (Currently Amended) The method according to ~~any of the claims from 1 to 7~~  
claim 1, wherein the ~~process fluid is one of the following:~~ solvent includes at least one of  
carbon dioxide, alkane or alkene with a number of carbon atoms ~~lower~~ less than or equal to 3,  
and light hydrofluoro carbide, ~~a mixture of alkanes and/or alkenes and/or HFC~~.

9. (Currently Amended) The method according to ~~any of the claims from 1 to 8~~  
claim 1, wherein ~~the moving of the process fluid is effected~~ the liquid phase is moved using a

volumetric compressor ~~situated~~ between ~~the~~ a separation section and ~~the~~ an accumulation tank.

10. (Currently Amended) The method according to ~~any of the claims from 1 to 8~~ claim 1, wherein ~~the moving of the process fluid is effected~~ the liquid phase is moved using a volumetric pump ~~situated~~ between ~~the~~ an accumulation tank and ~~the~~ an extractor vessel.

11. (Currently Amended) The method according to ~~any of the previous claims~~ claim 1, wherein the oily ~~phase extracted~~ fraction is separated by the use of one or more separators ~~on-line~~.

12. (Currently Amended) The method according to claim 11, wherein at least one of the separation section ~~consists of a single separator with~~ separators is configured to provide a cyclone effect.

13. (Currently Amended) The method according to claim 11, wherein ~~the separation section consists of two separators, the first with~~ the oily phase is separated by a first separator configured to remove the solvent by an inertial impact, the second with and a second separator configured to remove the solvent by a cyclone effect.

14. (Currently Amended) The method according to ~~claims 11-13~~ claim 11, wherein a filter ~~for separating the entrained~~ configured to separate liquid[[,]] ~~from the solvent~~ is situated down-stream of at least one of the separation section separators.

15. (Currently Amended) The method according to claim 9, wherein ~~the a~~ phase passage of the ~~process fluid solvent~~ take place by an energy exchange between ~~the a~~ heat of vaporization heat and ~~the a~~ heat of condensation heat.

16. (New) The method according to claim 1, further comprising:  
mixing the cuttings with an inert material prior to mixing the cuttings with the solvent.